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EXAMINER	
THANH, QUANG D	

ART UNIT	PAPER NUMBER
3764	

DATE MAILED: 05/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/009,050	RHODES ET AL.	
	Examiner	Art Unit	
	Quang D. Thanh	3764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 February 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17 and 19-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17 and 19-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION\

This office action is responsive to the amendment filed on 2/14/05. As directed by the amendment: claims 1-4, 6, 9-14, 16, 19-25 have been amended; claim 18 has been cancelled. Thus, claims 1-17 and 19-26 are presently pending in this application.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1, 20 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Takeuchi (4,622,706). Re claims 1 and 20, Takeuchi discloses a massage method comprising the steps of : providing a seat (the air mat can by laid on a chair as disclosed in the abstract, thus would serve as a chair cushion thereby "providing a seat") including more than one expandable chamber 3 (fig. 1), a pressure system 8 and an exhaust system 9 (fig. 1), a controller 25 (fig. 26, col. 11, line 65 to col. 12, lines 9) configured to operate the pressure and exhaust system according to multiple selectable predetermined control index sequences (sequences 1,2, 4 and 5 in fig. 39); selecting a massage sequence by selecting one of the control index sequences (selecting one of the sequences in figs. 39) causing the controller to alternately produce inflow of fluid to each chamber by fluid communication between the selected chambers, and produce an

outflow of fluid from each of the selected chambers by causing the exhaust system (discharge pump 9) to actively draw fluid from the chambers (fig. 1, col. 5, lines 31-38), (claim 23) the exhaust system includes an exhaust pump 9 connected to the controller (col. 7, lines 17-22) and operable to draw fluid from selected chambers (fig. 1, col. 5, lines 31-38).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-3, 9, 16, 19-23, 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bullard (4,865,020) in view of Thomas et al. (6,212,719).

3. Re claims 1 and 20, Bullard discloses a massage method (pressure cuffs are being inflated and deflated sequentially to promote blood circulation to a body part thus simulate a massaging action) comprising the steps of: providing an apparatus including more than one expandable chamber 1A-D to 7A-D (fig. 1A and 3), a pressure system 23 and an exhaust system (E1-7 and 29, fig. 3), a controller (electric control circuit in fig. 4, col. 6, lines 31-41) configured to operate the pressure and exhaust system according to multiple selectable predetermined control index sequences (a chart showing 5 sequences in col. 4 and peristaltic sequences disclosed in col. 8, lines 38-58); selecting a massage sequence by selecting one of the control index sequences (selecting one of the 5 sequences in col. 4) causing the controller to alternately produce inflow of fluid to

each chamber by fluid communication between the selected chambers, and produce an outflow of fluid from each of the selected chambers by causing the exhaust system (vacuum tank 29) to actively draw fluid from the chambers (fig. 3, col. 7, line 65 to col. 8, line 2). Bullard does not teach that the apparatus can be utilized as a seat cushion. However, Thomas teaches an air massager cushioning device having a plurality of expandable chambers 28 that can be utilized as a mattress (fig. 2), a seat cushion (fig. 14), a cuff apparatus (fig. 17-18) or incorporated in a lounge chair (fig. 16). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to incorporate the Bullard's device into a seating device such as a chair, as suggested and taught by Thomas, for the purpose of providing continuous overall cushioned support to the user seated in the seating device while alternating the areas of supporting contact portions, which would improve blood circulation thereby reduce medical problems and/or fatigue caused by prolonged seating.

4. Re claims 2-3, Bullard discloses the step of providing a pressure system that includes a source of pressurized fluid 23 and a supply valve 25 (fig. 3) connected to the controller for controlling fluid flow from the source of pressurized fluid to each of the expandable chambers; providing each chamber with an exhaust valve E1-E7 connected to the controller for controlling the fluid flow from a previously inflated expandable chamber (fig. 3); and operating the supply and exhaust valves to produce individual chamber to chamber inflation followed by chamber to chamber deflation (figs. 3 and 5, col. 7, line 65 to col. 8, line 2); (claim 3) a common exhaust provided with a relief valve 27 (fig. 3, col. 6, lines 9-12); providing fluid communication 26 between the expandable

chambers and the common exhaust; and opening the common exhaust in accordance with the massage index sequence (col. 6, lines 1-12).

5. Re claim 9, Bullard discloses the step of providing the chambers as a series of zones (in this case, each chamber is considered as a zone and the selected chambers 1A to 7A are collectively viewed as a series of zones) , and the step of selecting a massage sequence includes selecting a massage index sequence that first inflates each of the zones in a series fashion then deflates each of the zones in a reverse series fashion (sequence 5, col. 5, lines 6-24).

6. Re claim 16 , Bullard discloses a pressure sensor 22 in fluid communication with each chamber and connected to the controller; and the step of selecting massage intensity includes selecting a massage index sequence that achieves a selected variable target pressure within each selected chamber by increasing fluid pressure in each chamber only until the controller receives respective signals from the pressure sensors indicating that their respective target pressures have been reached (col. 7, lines 20-38).

7. Re claim 19 , Bullard discloses an exhaust system that includes an exhaust pump 20 (drawing air from vacuum tank 29); and providing fluid communication 26/28 between selected chambers to be deflated and the exhaust pump; and operating the pump to evacuate the selected chambers (col. 7, line 65 to col. 8, line 2).

8. Re claims 21-23 , Bullard discloses a source of pressurized fluid 23 connected by supply paths 26 to respective supply valves P1-P7 positioned to selectively provide fluid communication between each expandable chamber and the source of pressurized

fluid (fig. 3); the exhaust system includes exhaust valves E1-E7 (fig. 3) connected to each respective chamber and configured to control the fluid flow from the respective chambers; a controller (electric control circuit in fig. 4) is operatively connected to the supply and exhaust valves and is configured to inflate selected chambers by opening corresponding ones of the supply valves and deflate selected chambers by opening corresponding ones of the exhaust valves and (col. 6, lines 31-41); the exhaust valves E1-E7 are distinct from the supply valves P1-P7 and the fluid supply paths (fig. 3) to minimize dwell time between inflation and deflation; (claim 22) a controller is connected to the pressure and exhaust systems and configured to control massage sequence by alternately operating the pressure and exhaust systems for selected chambers according to a predetermined massage control index sequences (5 sequences in col. 4), and control massage intensity by allowing fluid pressure within the selected chambers to increase only until a selected variable target pressure is reached (col. 7, lines 20-38); (claim 23) the exhaust system includes an exhaust pump 20 connected to the controller and operable to draw fluid from selected chambers (fig. 3, col. 7, line 65 to col. 8, line 2).

9. Re claims 25-26, the combined Bullard/Thomas discloses a seat (as explained above) comprising: more than one expandable chamber 1A-D to 7A-D (fig. 1A and 3); a pressure system 23 connected to each expandable chamber and configured to provide fluid into the expandable chambers, an exhaust system 29 including separate exhaust valves E1-E7 connected to each respective expandable chamber and configured to produce an outflow of fluid from the expandable chambers through the exhaust valves

(fig. 3, col. 7, line 65 to col. 8, line 2); and a controller connected to the pressure and exhaust systems and configured to control massage sequence by alternately operating the pressure and exhaust systems for selected chambers and operating selected ones of the exhaust valves according to a predetermined massage control index sequence (5 sequences in col. 4); (claim 26) selecting massage intensity by allowing fluid pressure within the selected chambers to increase only until a selected variable target pressure is reached (col. 5, line 1-2, and col. 7, lines 20-38).

10. Claims 1-8,10-15, 17, 19-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gillen, Jr. et al. (5,211,162) in view of Bullard; and further in view of Thomas et al. (6,212,719).

11. Re claims 1-2, 6, 19-20 and 23, Gillen discloses a massage method (claims 1 and 20) comprising the steps of : providing a body support system including more than one expandable chamber 51A-58A , a pressure/exhaust system 15 with pressure pump 17 and exhaust valve 21V-28V, a controller 30 (fig. 3) configured to operate the pressure/exhaust system according to multiple selectable predetermined control index sequences (3 sequences including single, double and triple-chambers as shown in figs. 9-11), selecting a massage sequence by selecting one of the control index sequences (buttons of keypad 31 is pressed in menu 2 to select any one of the sequences for the single, double and triple-chambers , figs. 9-11, col. 9, lines 7-11) causing the controller to alternately produce inflow of fluid to each chamber by fluid communication between the selected chambers and the pressure system, and produce an outflow of fluid from

each of the selected chambers, except that it does not actively draw fluid from the chambers. However, Bullard teaches that a vacuum tank 29 can be included in the apparatus and arranged together with a pump 20 in such a way (fig. 3) that air from each cuff could be actively withdrawn and evacuated quickly (col. 7, line 65 to col. 8, line 2). In this mode, the cuffs deflate more rapidly and can be completely deflated without external pressure being applied to them. Bullard further discloses a pressure system that includes a source of pressurized fluid 23 and a supply valve 25 (fig. 3) connected to the controller for controlling fluid flow from the source of pressurized fluid to each of the expandable chambers; providing each chamber with an exhaust valve E1-E7 connected to the controller for controlling the fluid flow from a previously inflated expandable chamber (fig. 3); and operating the supply and exhaust valves to produce individual chamber to chamber inflation followed by chamber to chamber deflation (figs. 3 and 5, col. 7, line 65 to col. 8, line 2). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to include an exhaust system having a pump in the Gillen's device, as suggested and taught by Bullard, for the purpose of discharging forcibly and quickly the air out of the chamber (col. 7, line 65 to col. 8, line 2) and thus providing a faster and more complete deflation when needed. Regarding the limitation of "providing a seat", Thomas teaches an air massager cushioning device having a plurality of expandable chamber 28 that can be utilized as a mattress (fig. 2), a seat cushion (fig. 14), a cuff apparatus (fig. 17-18) or incorporated in a lounge chair having expandable chambers in a back and seat support (fig. 16). Therefore, it would have been obvious to one of ordinary skill in the art at the time of

invention was made to incorporate the Gillen's device into a seating device such as a chair, as suggested and taught by Thomas, for the purpose of providing continuous overall cushioned support to the user seated in the seating device while alternating the areas of supporting contact portions, which would mobilize the spine and stretch and relax the musculature and soft tissue of the user's back thereby reduce medical problems and/or fatigue caused by prolonged seating.

12. Re claims 3-4, 19 and 23, Gillen discloses a common exhaust provided with a relief valve 14 (fig. 3, col. 5, lines 61-64); providing fluid communication 18 between the expandable chambers and the common exhaust; and opening the common exhaust in accordance with the massage index sequence (col. 5, lines 44-64); (claims 4,19 and 23) the combined Gillen/Bullard would have included a pressure pump and an exhaust pump as mentioned above and providing fluid communication 28 between selected chambers to be deflated and the exhaust pump; and operating the pump to evacuate the selected chambers (Bullard, fig. 3, col. 7, line 65 to col. 8, line 2).

13. Re claims 5, 7-8, and 24, Gillen discloses (claims 5 and 24) the step of providing a user initiated switch (keypad 31, fig. 3), a range of desired massage index sequences (3 sequences including single, double and triple-chambers as shown in figs. 9-11, and operating the switch to select one of the desired massage index sequences (buttons of keypad 31 is pressed in menu 2 to select any one of the sequences for the single, double and triple-chambers , figs. 9-11, col. 9, lines 7-11); (claim 7) operating (knob 14A) the pressure system to equalize the pressure between predetermined ones (col. 9, lines 23-27); (claim 8) providing a pressure sensor 20, multiple valves 21V-28V and a

pump 17, a micro-controller 33 (col. 6, lines 12-14) responding to the pressure sensor 20 to initially inflate the chambers with all the valves initially opening prior to cyclically connecting each chamber to the pressure source (col. 6, lines 23-32).

14. Re claims 10-11 and 13 , Gillen teaches that if a single chamber option is elected, each of chambers 51A-58A is inflated sequentially . Moreover, Gillen also teaches that if double or triple-chamber option is elected, the chambers are sequentially inflated in a staggered manner (col. 9, lines 11-17), and thus producing overlapping sequencing inflation and deflation (col. 11, lines 18-58). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to include various alternatives sequential inflation and deflation in operation of the device as claimed, for the purpose of providing desirable manner in which the user's back can be massaged in a particular sequence that would suit the user's need.

15. Re claims 12 and 14, Gillen/Bullard discloses the claimed invention except that it does not explicitly reveal various sequencing of the inflation and deflation of the chambers as claimed. However, Gillen teaches that if a single chamber option is elected, each of chambers 51A-58A is inflated sequentially. Moreover, Gillen also teaches that if double or triple-chamber option is elected, the chambers are sequentially inflated in a staggered manner (col. 9, lines 11-17), and thus producing overlapping sequencing inflation and deflation (col. 11, lines 18-58). Gillen's Fig. 10 illustrates an example of inflating the first cell 51A between 0-6 seconds and equalizing first 51A and second 52A cells between 3-6 seconds, deflating the first cell after 6 second (col. 10, lines 34-68). Therefore, it would have been obvious to one of ordinary skill in the art at

the time of invention was made to include various alternatives sequential inflation and deflation in operation of the Gillen/Bullard 's device, as suggested by Gillen, for the purpose of providing a wide variety desirable massaging types in which the user's back can be massaged in a particular sequence that would suit the user's need. Given the inherent structural features that have been demonstrated in the art, such as the microprocessor controller capable of producing a wide variety desirable sequences, it is well within the knowledge of a skilled artisan to be capable of using the prior art's device to provide various alternatives sequential inflation and deflation as claimed by the present invention.

16. Re claims 15,17, 21-22, Gillen discloses (claim 15) the step of selecting massage intensity includes selecting a massage index sequence that achieves a selected variable target pressure within each selected chamber by scaling inflation time (fig. 9 shows scaling time of 6 seconds for each chamber); (claim 17) the step of selecting massage sequence and massage intensity are accomplished by selecting a single massage control index sequence (fig. 9); (claim 21) the combined references (as discussed above) discloses a source of pressurized fluid 23 connected by supply paths 26 to respective supply valves P1-P7 positioned to selectively provide fluid communication between each expandable chamber and the source of pressurized fluid (Bullard fig. 3); the exhaust system includes exhaust valves E1-E7 (fig. 3) connected to each respective chamber and configured to control the fluid flow from the respective chambers; a controller (electric control circuit in fig. 4) is operatively connected to the supply and exhaust valves and is configured to inflate selected chambers by opening

corresponding ones of the supply valves and deflate selected chambers by opening corresponding ones of the exhaust valves and (col. 6, lines 31-41); the exhaust valves E1-E7 are distinct from the supply valves P1-P7 and the fluid supply paths (fig. 3) to minimize dwell time between inflation and deflation; (claim 22) Gillen discloses a controller 30 (fig. 3) connected to the pressure/exhaust system and configured to control the massage sequence by alternately operating the pressure/exhaust system according to a predetermined control index sequences (3 sequences including single, double and triple-chambers as shown in figs. 9-11); and controlling massage intensity by allowing pressure within the selected chambers to increase only until a selected variable target pressure is reached (via knob 14A, col. 9, lines 23-27).

Response to Arguments

17. Applicant's arguments filed 2/14/05 have been considered but are moot in view of the new ground(s) of rejection.

18. In response to applicant's argument that "Takeuchi neither teaches nor suggests a seat that incorporates these structures", the examiner respectfully disagrees. The claimed language requires only "providing a seat including more than one expandable chamber", and Takeuchi clearly teaches in the abstract that the air mat can by laid on a chair, thus would serve as a chair cushion, and therefore would comprehend the limitation "providing a seat". Moreover it is noted that the features upon which applicant relies (i.e., a seat that *incorporates* these structures) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from

the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

19. Applicant's arguments and Declaration of commercial success of the invention filed 2/14/05 have been fully considered but they are not persuasive. In response to applicant's argument that "The applicant maintains that neither Gillen nor Bullard disclose a method that either includes or suggests the step of providing a seat including more than one expandable chamber. The applicant additionally maintains that the commercial success of the invention, as set forth in the accompanying Declaration of Derren Rogers, militates against a finding of obviousness", the examiner respectfully disagrees. Bullard and Gillen already teaches an apparatus having multiple expandable chambers that can be used as a cuff wrapping around a body portion or a mattress supporting the back, except both references do not explicitly teach a seat structure. Thomas is cited to specifically teach various alternative application of an air massager cushioning device having a plurality of expandable chamber 28 that can be utilized as a mattress (fig. 2), a seat cushion (fig. 14), a cuff apparatus (fig. 17-18) or incorporated in a lounge chair (fig. 16). Therefore, it would have been obvious to one of ordinary skill in the art to apply either Gillen's or Bullard's device in the form of seating device such as a chair, as suggested and taught by Thomas, for the purpose of providing continuous overall cushioned support to the user seated in the seating device while alternating the areas of supporting contact portions, thereby reduce medical problems and/or fatigue caused by prolonged seating.

20. In response to applicant's argument re claims 2-7, 10-15, 17, 19, and 21-24 claims 10-14 that there is no motivation and no obviousness taught or suggested in the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See In re Fine, 837 F.2d 1071, 5 USPQZd 1596 (Fed. Cir. 1988) and In re Jones, 958 F.2d 347, 21 USPQZd 1941 (Fed. Cir. 1992). In this case, Gillen lacks an exhaust system and Bullard is cited to teach that a vacuum tank 29 can be included in the apparatus and arranged together with a pump 20 in such a way (fig. 3) that air from each cuff could be actively withdrawn and evacuated quickly (col. 7, line 65 to col. 8, line 2). In this mode, the cuffs deflate more rapidly and can be completely deflated without external pressure being applied to them. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to include an exhaust system having a pump in the Gillen's device, as suggested and taught by Bullard, for the purpose of discharging forcibly and quickly the air out of the chamber (col. 7, line 65 to col. 8, line 2) and thus providing a faster and more complete deflation when needed.

21. In response to applicant's argument that "Under the true test, it's only when an examiner finds identity (or at least similarity) between the specific problem solved by the inventor and a problem solved by a prior art reference, that the examiner can fairly conclude that the invention is obvious, or, in other words, the pertinent motivation is a motivation to make obvious the technologic advance, not the omnipresent motivation to

provide a competitive advantage or provide economic benefit", the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). Furthermore, since the applicants fails to show any criticality produced by the claimed sequences of the instant application and because applicant has not disclosed that having such claimed sequences provides an advantage or solves any stated problem, therefore absent a teaching as to criticality that the chambers are inflated and deflated according the claimed sequence, this particular arrangement is deemed to have been known by those skilled in the art since the instant specification and evidence of record fail to attribute any significance (novel or unexpected results) to a particular arrangement. *In re Kuhle,* 526 F.2d 553,555,188 USPQ 7, 9 (CCPA 1975).

Conclusion

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Noble '425 teaches a cushioned seating assembly.

23. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quang D. Thanh whose telephone number is (571) 272-4982. The examiner can normally be reached on Monday-Thursday & alternate Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Huson can be reached on (571) 272-4887. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306 for both regular and After-Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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May 9, 2005

QT

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